Table 6-2. Landuse/landcover classification levels (LULC).

LULC Label 1	LULC Label 2	LULC Label 3
Developed	Non-residential developed, Residential, Mixed urban	Mixed urban, Commercial, Communications/utilities, Institutional, Agriculture/livestock, Transportation, Recreation, Residential, Single-family residential, Multi-family residential
Vegetated	Forest, Herbaceous, Vegetated, Wetland	Coniferous, Deciduous, Coniferous deciduous mixed, Brush/ shrub land, Natural Herbaceous, Vegetated, Wooded wetland, Herbaceous wetland
Bare	Mixed bare, Quarries/ strip mines/ Gravel pits, Perennial ice/snow	Mixed bare, Perennial ice/snow, Quarries/ strip mines/ Gravel pits,
Water	Open water	Open water

Landuse/landcover vector layer classified by LULC Label-2 was used in the analysis. The attribute table of this layer was edited to include erodibility factors for the 11 classes. Assigned erodibility values varied from 1 to 5 for landuse/landcover classes with a value of 0 for water bodies (Table 6-3). The erodibility factor value was used when converting the landuse/landcover layer to a 10 by 10m resolution raster. The raster representing the Label-2 landuse/landcover classified by erodibility factor is shown in Figure 6-3.

Table 6-3. Landuse/landcover erodibility potential.

Landuse/Landcover Label 2 classification	Assigned erodibility class
Open Water, Perennial Ice/Snow	0
Forest, Wetland	1
Vegetated, Herbaceous, Mixed Bare, Urban	2
Residential	3
Non-residential Developed	4
Quarries/Strip Mines/Gravel Pits	5

Erodibility values of 0 were assigned to open water represented by Lake Tahoe and smaller lakes within the basin, and areas under perennial ice and snow. Most of the vegetated areas have the lowest erodibility indexes. Residential and non-residential developed have a higher erodibility index, and quarries and mines have the highest erodibility indexes.
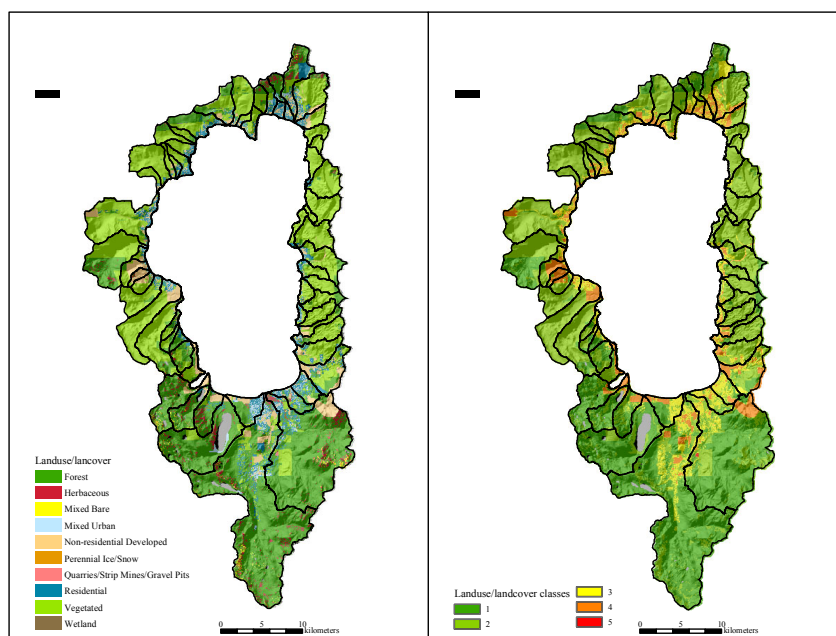
Figure 6-3. Distribution of landuse/landcover (left) and assigned class values for potential erodibility based on the characteristics shown in Table 6-3 (right).

6.2.3   Paved and Unpaved Roads, Trails and Streams

The area and density of various types of roads and trails were included as a measure of land disturbance. Roads, trails and stream layers of the Lake Tahoe Basin were also converted to raster format before conducting the GIS analysis. The road layer was subdivided into paved and unpaved roads because of a possible difference in the level of sediment contribution from paved and unpaved roads. Unpaved roads and streams were converted to a 5 by 5 m raster assuming a 5 m average road width. Paved road raster was created with a 10 by 10 m grid resolution. Roads (paved and unpaved), trails and stream grid layers were used to determine road, trail and stream densities by dividing by watershed area or the area above a particular gaging station.

The major concentration of paved roads occurrs at the edge of the lake and in populated areas along the lake shoreline. The city of South Lake Tahoe has the greatest concentration of roads. Other cities around the lake also concentrate a great number of paved roads.

Table 6-4. Erodibility classes assigned to roads, trails and streams in the Lake Tahoe Basin.

Feature	Assigned erodibility class
Paved roads	1
Unpaved roads	5
Trails	5
Streams	3